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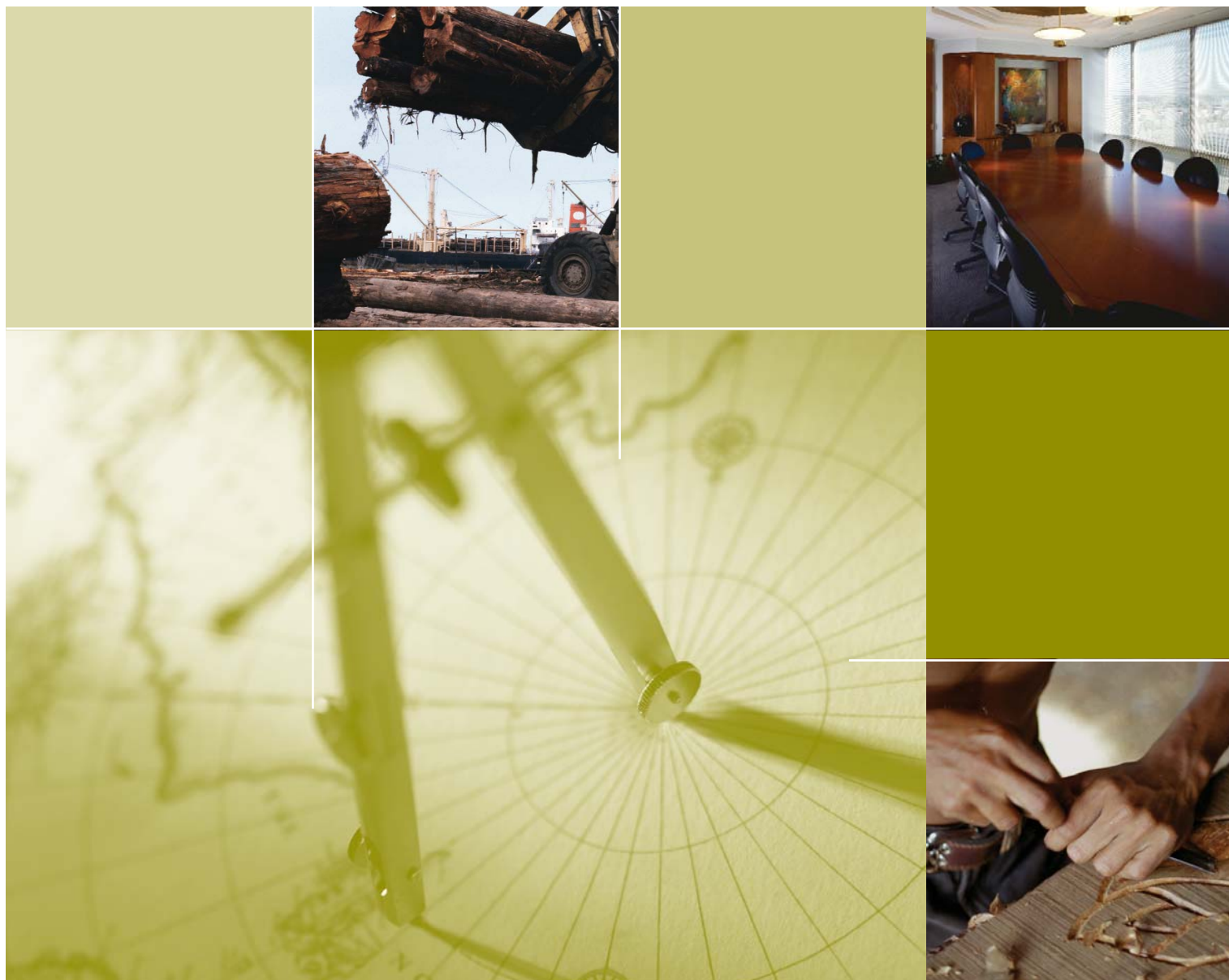
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THE GLOBAL WOOD FURNITURE VALUE CHAIN:

What Prospects for Upgrading
by Developing Countries



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
economy environment employment

sectoral studies series

THE GLOBAL WOOD FURNITURE VALUE CHAIN:

What Prospects for Upgrading by Developing Countries

The case of South Africa

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna, 2003

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Abstract

Because of its resource and labour intensity, the wood furniture sector presents an opportunity for developing countries and their firms to participate effectively in the global economy. This paper begins with a brief description of the global wood furniture industry and highlights the importance of exports wood furniture products for developing countries and emerging and transitional economies. The paper then maps the wood furniture value chain and opens-up the nature of the buying function, since this function represents the key form of control over global production networks in this sector (that is, the wood furniture chain is what is increasingly referred to as a “buyer-driven chain”).¹ The paper then asks what producers need to do in order to upgrade their activities, particularly in developing countries. In order to address these issues the authors describe the evolution of an initiative designed to promote the upgrading of one segment of the wood furniture industry in a middle-income country, South Africa. This experience is then used to generate a series of generic policy challenges, which might be transferred to other countries and to other sectors.

¹The important distinction between buyer- and producer-driven chains is derived from the works of Gereffi (see, for example, Gereffi, 1999). See also UNIDO paper on Integrating Local Industries into Global Value Chains: What Prospects for Developing Countries? *Forthcoming, 2003*.

The global furniture sector: an overview²

Furniture is a huge global business

Furniture is big business. Between 1995 and 2000 trade in furniture worldwide grew by 36 per cent, faster than world merchandise trade as a whole (26.5 per cent), apparel (32 per cent) and footwear (1 per cent). By 2000 it was the largest low-tech sector, with total global trade worth US\$57.4 billion, exceeding apparel (US\$51 billion) and footwear (US\$36.5 billion). In the European Union (EU), extra-intra furniture imports grew by 20 per cent from 1995 to 2000 compared with 17 per cent for total extra-intra EU imports.³

Furniture has traditionally been a resource and labour-intensive industry that includes both local craft-based firms and large volume producers. Mass-producing furniture became a viable manufacturing strategy with the advent of flat-pack or ready-to-assemble designed furniture. This product innovation paved the way for firms to design, manufacture and ship products in large quantities. Firms that mass-produce flat-pack furniture tend to supply products for the low- to medium-price markets. Solid wood furniture manufacturers have retained important niche market segments primarily for high-end, expensive and design-led products. These specialized products tend to be purchased locally while mass-produced, large-volume products are sold locally and for export.

As can be seen from Table 1, out of the 15 major exporters, six are developing countries (viz. Brazil, China, Indonesia, Malaysia, Mexico and Thailand) and four transition economies (viz. Czech Republic, Poland, Romania and Slovenia). These 10 countries tend to be large-volume exporters and low-volume importers of furniture (thereby being large net exporters). Industrialized countries on the whole export and import large volumes of furniture with Italy by far the largest net exporter, with Canada, Denmark, Spain and Sweden in third, seventh, tenth and fourteenth places respectively.

² This section is drawn from Kaplinsky and Readman (2000) (updating data from UNCTAD/ITC (www.intracen.org)).

³ EU extra-intra imports include imports from EU countries (intra) and imports from non-EU countries (extra).

Table 1 Global furniture trade—top 15 net exporting countries (US\$ million)^a

<i>Country</i>	<i>Gross exports 2000</i>	<i>Net exports 1995</i>	<i>Net exports 2000</i>	<i>Net exports percentage change 1995-2000</i>
Italy	8,359	7,595	7,395	-3
China	4,582	1,671	4,412	164
Canada	5,179	685	2,044	198
Poland	2,191	1,180	1,815	54
Indonesia	1,518	819	1,498	83
Malaysia	1,596	826	1,491	80
Denmark	1,900	1,687	1,209	-28
Mexico	3,315	468	1,173	151
Thailand	949	712	909	28
Spain	1,453	523	531	2
Slovenia	586	409	461	13
Czech Rep	780	148	445	201
Romania	445	472	377	-20
Sweden	1,298	510	338	-34
Brazil	496	212	333	57
Total of rest	22,742			
Total ^b	57,388			

Source: ITC (www.intracen.org).

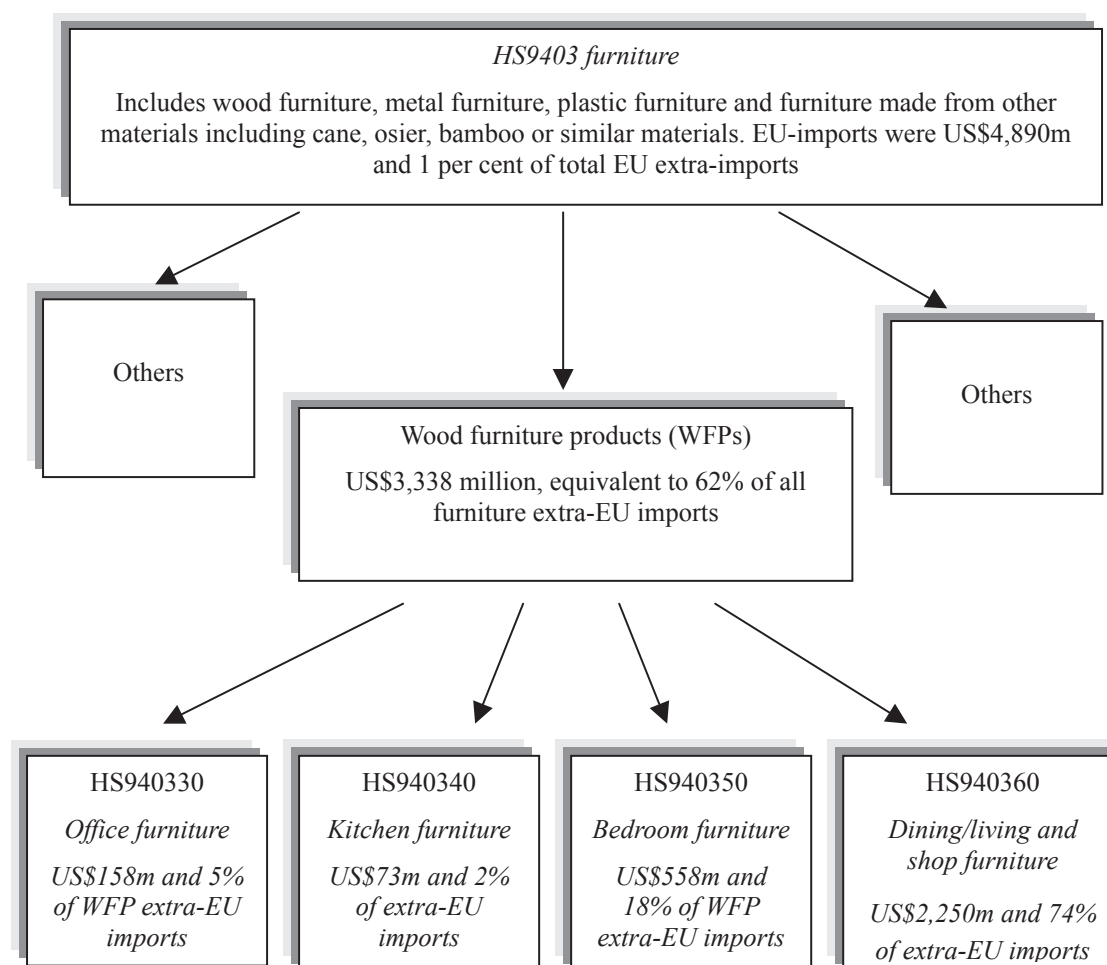
Notes: ^a Standard International trade Classification SITC821, Furniture and stuffed furnishings and includes wood, metal and plastic items.

^b Statistically speaking, total net exports should equal zero (total gross exports equal total gross imports). Accounting practices vary among national statistical units responsible for totalling trade flows so any figure (other than the statistical zero) is nonsensical.

The furniture industry is divided into different product groups, each of which has distinct market segments (see Figure 1). The Harmonized System of product classification distinguishes four wood product groups, namely office furniture, kitchen furniture, bedroom furniture, and dining/living and shop furniture as well as metal and plastic furniture and furniture parts. These product groupings do not differentiate between craft and mass-produced items or between low- and high-priced market items. Total furniture imports accounted for 1 per cent of all extra-EU imports in 2000 and amounted to US\$4,890 million. The wood furniture products (WFP) accounted for the largest share of furniture imports (62 per cent) with extra EU wood furniture imports totalling US\$3,038 million in 2000.

Figure 1 shows their relationship to the furniture sector as a whole and their share of EU furniture imports in 2000.

Figure 1 Furniture imports into the EU (extra) in 2000 (US\$ million)



Sources: UNCTAD (www.unctad.org/trains/index.htm); WTO (www.wto.org/).

Note: m = million; HS = Harmonized System.

Wood furniture is becoming increasingly competitive, with more producers entering the market and prices falling, as can be seen from Figure 2.⁴ A detailed analysis of the data by product sub-group and countries of origin highlights a number of other points.

- In all sub-sectors (viz. office, kitchen, bedroom and dining/living and shop furniture) the unit prices of imports from the four categories of country (using the World Bank's distinction between low-income, lower-middle, upper-middle and high-income countries) tended to converge, that is, a world price was developing.
- The unit price of EU imports decreased, except in the bedroom category where they remained broadly stable (Figure 2).
- While the unit price of imports from high-income countries fell, those from middle-income countries rose (Table 2), suggesting that middle-income producers, particularly Czech Republic, Poland, Romania, and

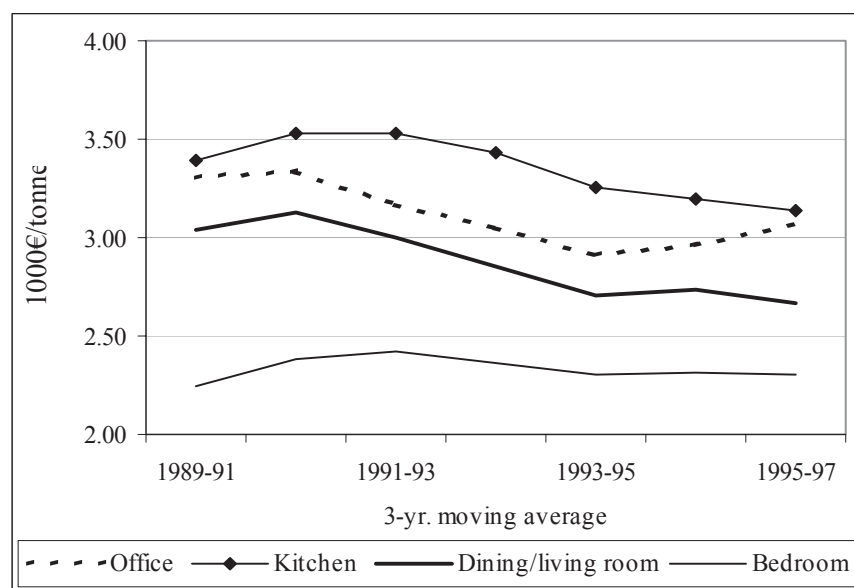
⁴ Because of its excellent database on the quantity and value of imports and its large size, the EU's import structure is used as a surrogate for global furniture trade (see Kaplinsky and Readman, 2000).

Slovenia (Table 1), were moving into product groups formerly dominated by high-income countries.

- d. Nevertheless, in 1995-1997 the unit price of imports from high-income countries remained significantly higher than those from upper-middle-income countries, by 144 per cent, 73 per cent, 72 per cent and 94 per cent respectively in the four sub-sectors.
- e. In all four sub-sectors, while exporting relatively low volumes, the unit value of imports from low-income countries was the next highest after the high-income countries. This suggests that firms from low-income countries concentrated on high-value, low-volume craft segments of these markets. In the two largest segments (bedroom and dining/living and shop furniture) unit prices rose, while in the other two they fell sharply.

These results show an industry in the throes of intense global competition, and therefore moving towards a common and falling global price. This suggests either lower barriers to entry and new entrants, or increasing efficiency and falling costs (or both). Countries can participate in the global market in market segments with sustained price declines, as in furniture, but in this scenario rising exports will not necessarily result in profitable production or in national income growth. For this to happen, the ability to upgrade is critical.

Figure 2 Extra-EU unit furniture import prices, 1989-1997



Source: Kaplinsky and Readman (2000).

Table 2 Changes in the EU furniture imports unit prices for high- and upper-middle-income countries (3-year moving average in percentage), 1990-1996

Classification	Av. unit prices, 1996 (€1,000/tonne)	Percentage change in unit prices, 1990-1996, imports from:			Ratio of high- income to upper-middle- income unit prices, 1996
		All countries	High- income countries	Upper-middle- income countries	
Furniture and stuffed furnishings HS94	2.62	-28	-30	34	1.35
All wood furniture Products (WFP)	2.64	-9	-13	39	1.96
Office furniture (HS940330)	3.07	-7	-11	43	2.44
Kitchen furniture (HS940340)	3.14	-8	-9	11	1.73
Bedroom furniture (HS940350)	2.30	+2	-3	51	1.72
Dining/living and shop furniture (HS940360)	2.67	-12	-16	41	1.94

Source: Kaplinsky and Readman (2000).

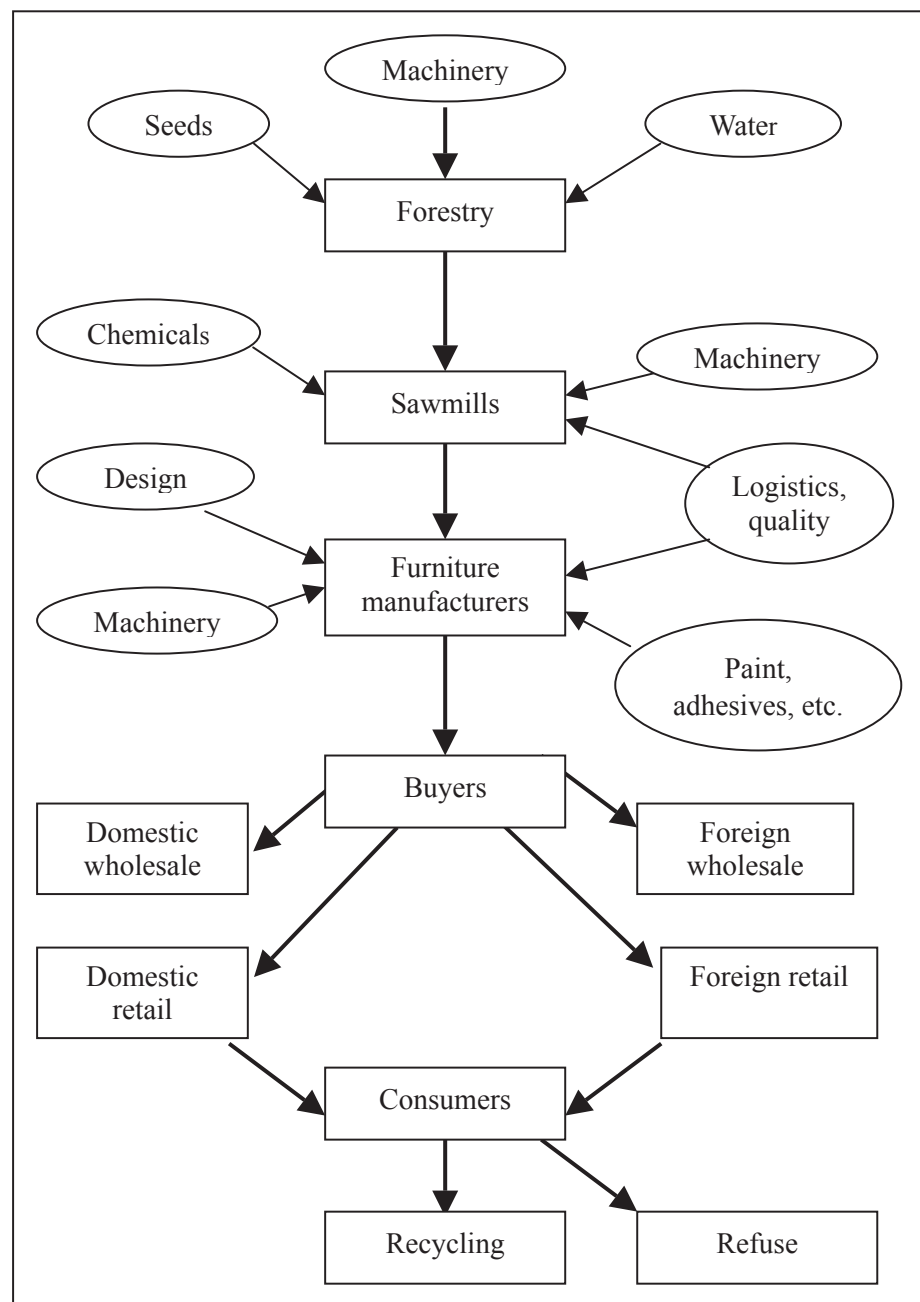
Note: HS = Harmonized System; WFP = (total) Wood Furniture Products.

The wood furniture value chain

There are many stages

Figure 3 shows the wood furniture value chain, which for the forestry sector involves the provision of seed inputs, chemicals, equipment and water. Cut logs then go to the sawmill, which obtains its primary inputs from the machinery sector. From there, sawn timber moves to furniture manufacturers who, in turn, obtain inputs from the machinery, adhesives and paint industries and also draw on design and branding skills from the service sector. Depending on which market is served, the furniture then passes through various intermediary stages until it reaches the final customer, who after use consigns the furniture for recycling or refuse.

Figure 3 Value chain in the wood furniture industry



Gaining access to final markets through global buyers

How can producers upgrade?

Value chain analysis throws light on the way in which producers enter global markets. This affects the price margins at which they can sell and their ability to upgrade. In some sectors, such as footwear, there is evidence that global buyers block producers from moving into more profitable activities such as design and branding but support the growth of their manufacturing capabilities. However, the growing capabilities of independent producers result not only from the promotional efforts of independent buyers, but also from the increasing tendency of multinational companies (MNCs) to outsource manufacturing activities, and to concentrate on areas such as design, technology, branding, logistics, marketing and after-sales service.

If upgrading initiatives by buyers are a general global trend, how is it working in the wood furniture sector? The number of market segments, and within these, different market niches (high-volume, price-sensitive, design-intensive, brand-intensive and so on) make this a complex issue. Moreover, markets vary from region to region. For example, softwoods are strong in Europe, but in Japan particleboard and hardwood products dominate the market. While retailing in France, Germany and the United Kingdom consists of a concentration of large, multi-store outlets, in Italy most furniture is sold in small independent outlets.

Different categories of buyers in the value chain

Despite this market complexity, three major buying agents, who facilitate the entry of wood furniture producers into final markets, can be identified.

- Large multi-store retailers, with outlets and suppliers in many countries. IKEA, for example, sources from 2,000 suppliers in 52 countries and has more than 300 outlets in three continents.
- Small-scale retailers, which buy directly from a limited number of suppliers in a limited number of countries.
- Specialized medium-sized buyers, which source from many countries and sell on to retail outlets, usually in a single country or region. These buyers may have over 1,500 suppliers, located in many countries. Even the smaller specialized buyers will typically source from more than 100 suppliers.

The research on these buyers encompasses a sample of three very large multi-store retailers, eight one-store retailers and six specialized buyers and is based on a combination of questionnaire responses and interviews. All of these buyers address the United Kingdom market, but two of the multi-store retailers have extensive global operations.

Who does what in the downstream of the wood furniture value chain?

The high-value activities in the downstream end of the value chain are shown in Table 3. They include customer support, retailing, distribution in final markets, marketing, product design, purchasing, international transport, and furniture production. Each of these buyers has a different presence in their chains (see also notes to Table 3). It is evident from this that:

- a. the only activity which all three types of buyers undertake in common is the buying activity itself;
- b. multi-store retailers outsource least; not only do they have a strong presence across a range of activities in the chain, but in IKEA's case this includes its own manufacturing facilities —“ we need to learn about production in order to be a good buyer”;
- c. specialized buyers tend to outsource most, their core competencies being buying and marketing; they do, however, also play a role in design;
- d. one-store retailers vary most in their range of activities; in the sample they tended to take responsibility for logistics and distribution, but in some cases (involving relatively small retailers and relatively large suppliers) these functions were assumed by furniture suppliers.

Table 3 The spread of downstream value chain activities undertaken by different types of buyers

<i>Activity</i>	<i>Multi-store retailer</i>	<i>One-store retailer</i>	<i>Specialized buyer</i>
After-sales service	Vertical bars	Vertical bars	Vertical bars
Retailing	Dark shading	Dark shading	No shading
Distribution	Vertical bars	Vertical bars	Light shading
Marketing	Vertical bars	Vertical bars	Dark shading
Design	Vertical bars	Light shading	Vertical bars
Purchasing	Dark shading	Dark shading	Dark shading
International transport	Vertical bars	Light shading	Vertical bars
Production	Light shading	No shading	No shading

Source: Company interviews and survey results by authors.

Note: Dark shading represents an exclusive or near-exclusive internalization of activity; vertical bars mean predominant internalization, light shading predominant outsourcing and no shading 100% outsourcing.

To which countries do buyers outsource activities?

All buyers outsource some activities but which and to whom? Table 4 illustrates certain points. Although all three buyer-types use developing-country producers, large global retailers tend to source a major share of their purchases from high-wage economies. In the case of the largest multi-store retailers, the overwhelming proportion of furniture, more than 85 per cent, comes from middle- and upper-income countries, although imports from China, Indonesia and Viet Nam are projected to grow rapidly during the early

part of the second millennium. The role of producers from middle-income East European economies and Russia has shown strong growth in since the mid-1990s especially for the European market.⁵ Only very small independent retailers depend upon low-income country suppliers for the design of their products, which tend to be low-margin and price-sensitive, like garden furniture. In so far as other activities are outsourced, the only other case where a low-income country producer will be directly involved is the control of deliveries to the store in the consuming country.

Table 4 Do firms from low-income countries participate in activities other than production?

<i>Activity</i>	<i>Multi-store retailer</i>		<i>One-store retailer</i>		<i>Specialized buyer</i>	
	<i>High-wage economies</i>	<i>Low-wage economies</i>	<i>High-wage economies</i>	<i>Low-wage economies</i>	<i>High-wage economies</i>	<i>Low-wage economies</i>
After-sales service						
Retailing						
Distribution						
Marketing						
Design						
Purchasing						
International transport						
Production						

Source: Company interviews and survey results by authors.

Note: Vertical bars mean a predominant reliance, shading a partial reliance and no shading reflects no reliance on firms from these different sets of countries.

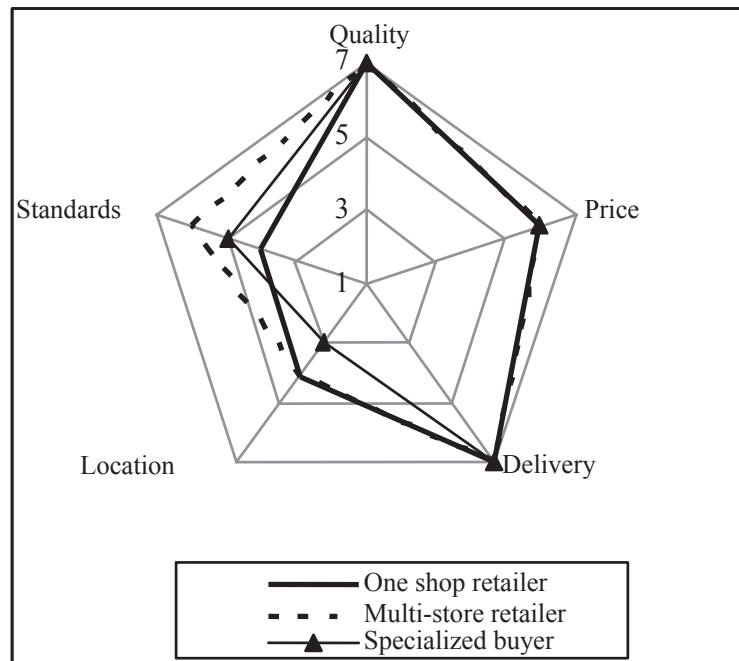
Do different buyers have different critical success factors?

In general, buyers serve different market segments. Often these are distinctively different, but the growing competence of manufacturers is bringing a diminishing trade-off between critical success factors. For example, large retailers are finding it possible to offer low prices and high quality, and low prices and variety. The different buyer preferences are shown in Figure 4. In each case, buyers were asked to specify their critical success factors, and to rank these on a scale of 1 (not important) to 7 (very important). The key conclusion is that suppliers to global retailers are confronted by a much more demanding set of critical success factors than if they sell to small retailers and specialist buyers. Not only are almost all the

⁵ Kaplinsky and Readman (2000).

critical success factors considered important, but they are also ranked as being of higher-order importance.

Figure 4 Critical success factors of different buyers



Source: Company interviews and survey results by authors.

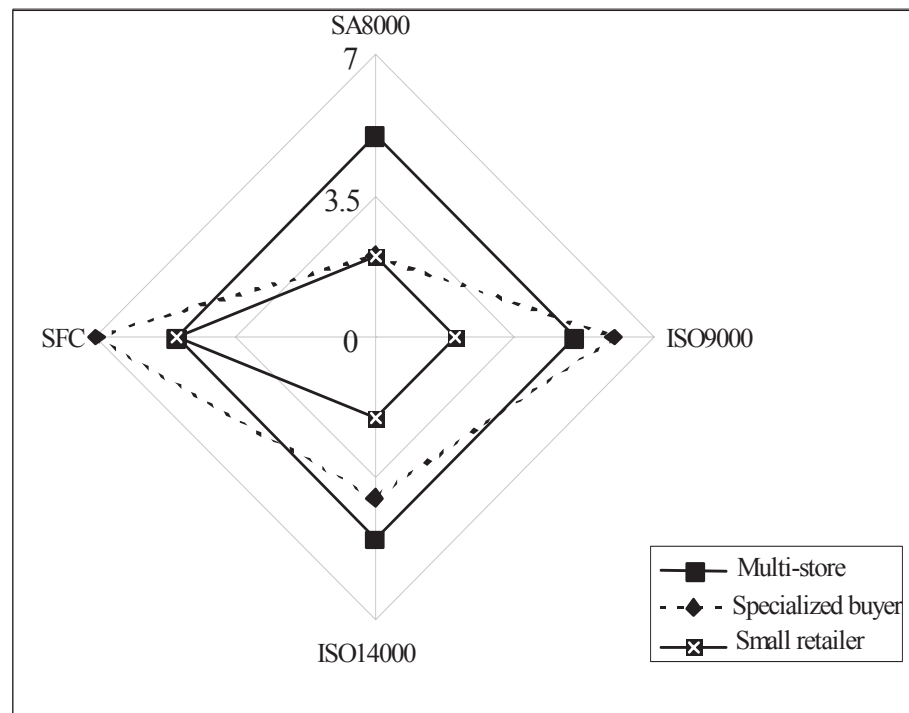
Note: one is not important and seven is very important.

An important characteristic of global production systems since the mid 1980s has been the growing dynamism of the critical success factors.⁶ Tariff reductions in consuming countries have led to a decline in entry barriers but the growth of various forms of certification has brought new ones.⁷ These predominantly relate to process characteristics rather than, as in the case of tariffs, to products. They include quality standards (ISO9000), labour standards (SA8000) and environmental standards. In the last case there is, in addition to the ISO14000 quality standard, a wood-sector specific standard (Forestry Sustainability Council, FSC), which relates to environmental practices throughout the chain, whereas ISO14000 only certifies processes within particular links in the chain. These standards are becoming increasingly important, especially for global retailers (Figure 5). In one case a global buyer insists on child-labour provisions and environmental standards as minimum criteria for suppliers bidding for contracts.

⁶ Industrial Restructuring Project (2000).

⁷ Institute of Development Studies (2000).

Figure 5 The importance of process standards for buyers



Source: Company interviews and survey results by authors.

Note: one is not important, seven is very important.

Do buyers assist their suppliers to upgrade?

Buyers themselves are participating in fiercely competitive markets. Unit import prices are declining, markets are becoming more complex and more demanding, and process standards have to be met. These critical success factors are also becoming more dynamic. Not only do suppliers have to develop the ability to upgrade existing processes and products, firms are expected to have the capacity to provide upgrading assistance to their own suppliers and provide value for their customers. Suppliers may also be required to develop new capabilities and to assume new functions such as product design and outward logistics, both within their own link of the chain and in different links. In addition, they may need to move into new but related sectors if they are to survive.

In some cases suppliers' capacity to upgrade will be helped by government support. It is also possible, given the restructuring under way in global value chains, that the purchasers of their product will help them. But how do buyers feel about this, and what effort do they make to improve suppliers' capabilities, and in which activities?

To answer this it is important to get a sense of how buyers see their global value chains evolving. The three types of furniture buyers observed a trend towards suppliers adopting new technologies and increasing their production capacities. Specialized buyers and small retailers observed a growing role for suppliers in designing products, while the large multi-store retailers saw an outsourcing trend in their suppliers. Of course, this only reflects the views of buyers. The picture from the other side of the buyer-supplier relationship may look rather different, as is seen below when the upgrading process in a particular context, South Africa, is discussed.

Table 5 Buyers' assessment of emerging trends in their supply chain

<i>Activity</i>	<i>Multi-store retailer</i>	<i>One-store retailer</i>	<i>Specialized buyer</i>
New production Technology	✓	✓	✓
New production Capacity	✓	✓	✓ ✓
Suppliers outsourcing to lower tiers	✓		
Suppliers designing products	✓	✓ ✓	✓
Suppliers marketing products	✓	✓ ✓	

Source: Company interviews and survey results by authors.

Note: One-tick represents partial developments taking place; two ticks represents a significant trend taking place in the supply chain.

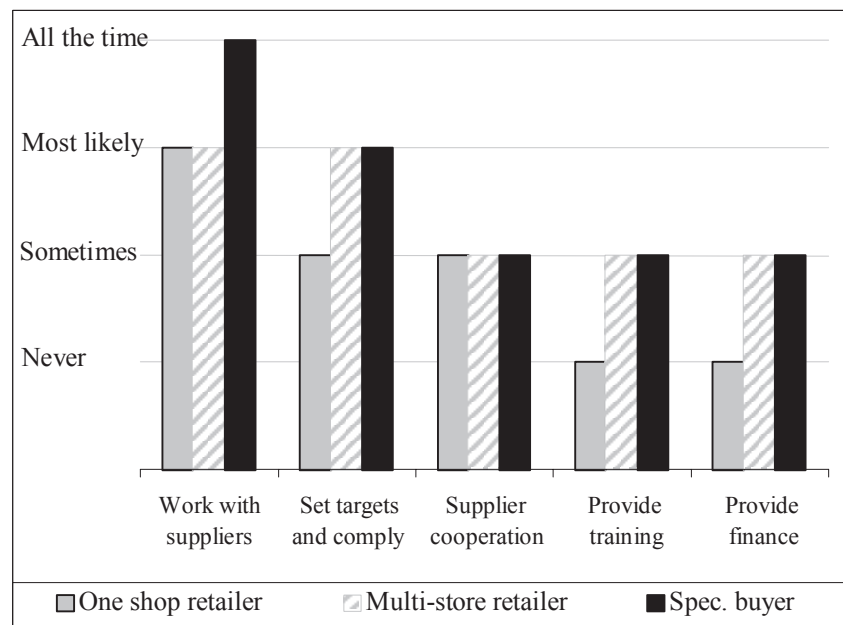
Given these trends, the question is: where and how much do buyers help their suppliers to upgrade? One area relates to processes, another to product capabilities and the third to design. In each case, there are various forms of support, which can be given. These include:

- a. providing clear product and process specifications to suppliers and checking performance;
- b. providing training;
- c. providing finance;
- d. working directly with suppliers to upgrade their performance;
- e. helping suppliers with their own supply chain.

Process and product upgrading

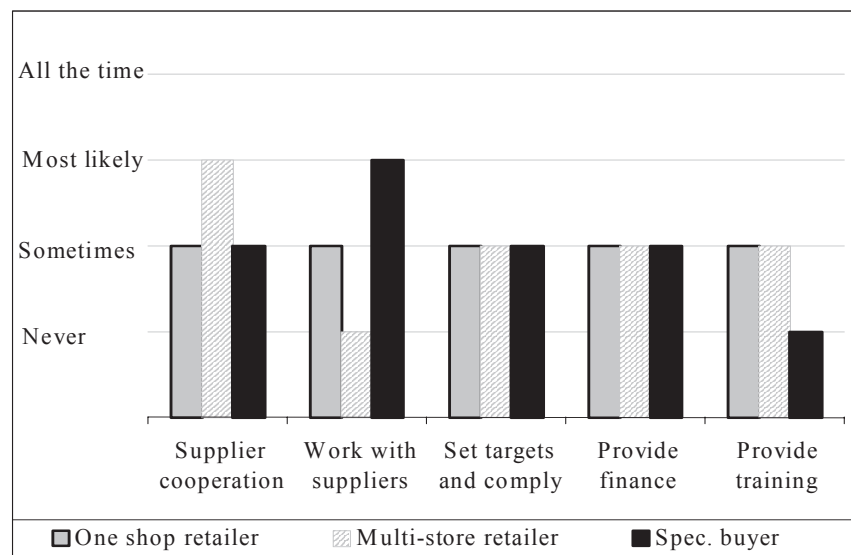
It is evident that the two categories of large scale buyers—the multi-shop retailer and the specialized buyers—claim to provide the greatest support to their suppliers, across all the various forms of process upgrading (Figure 6). With regard to product upgrading (Figure 7), there is a smaller difference in the perceptions, which these buyers have of the assistance, which they provide. However, in all cases, buyers believe that it is their duty to provide clear signals to their suppliers, and that this is a prior step for suppliers to develop their capacities to upgrade.

Figure 6 Buyers' perceptions of their role in promoting process upgrading by their suppliers



Source: Company interviews and survey results by authors.

Figure 7 Buyers' perceptions of their role in promoting product upgrading by their suppliers



Source: Company interviews and survey results by authors.

Functional upgrading Activities in the furniture value chain range from production (which can be done anywhere by any party) to retailing (which can only be done in the country of the final market). Some activities, therefore, cannot be carried out in low-income countries, whereas others potentially can. With respect to the disembodied activities (essentially all links after production such as logistics and quality procedures), there is a contested terrain between different chain actors. Which activities are contested, and which activities are buyers prepared to help producers to upgrade?

Buyers were prepared to facilitate functional upgrading within production. How this translates into actual upgrading in the particular value chains is more complex, and practical decisions about which producers to assist, which to discard, etc. require detailed research into perceptions and realities on both sides of any buyer/ supplier relationship. What is clear is that some of the producers in which buyers had confidence were not only encouraged, but also helped, to move into quality-assurance and logistical activities.

Functional upgrading involving producers moving into other links was more complicated. On the one hand, there were some activities, such as international logistics and transport, and distribution, where none of the buyers claimed a proprietary interest. Even though they took no active steps to promote upgrading by their suppliers in these areas, they did not block them. Similarly, although advertising was outsourced to specialist agencies, in no cases were firms in low-income countries involved, and nor were any attempts made to do so.

Different approaches to upgrading in design There were, however, different attitudes among buyers regarding design. The small retailers had no design capability of their own, and often sold into standard markets, as for garden furniture. These firms welcomed producers taking responsibility for design—they are in essence design-takers. Other buyers could be described as design intermediaries. Their competitive advantage arises from the disjuncture of producer and retailer, and they benefit from keeping the two apart. This is partly achieved by finding new designs and passing them on to producers. In this scenario, buyers do not encourage the functional upgrading of their suppliers. In any case, as one of them put it, “even if you get the design 95 per cent right, that small 5 per cent will lose you customers and retailers do not want to take the chance. Knowing your home market is very different from knowing another market.” It is for this reason, for example, that Polish-designed furniture is blocked from most West European markets although not from Germany, where tastes are similar. The final category of buyer is that of the design makers, that is, the global retail chains, which invests significant resources in design. IKEA, for example, has designers living in the homes of final consumers in new markets. They may employ specialized design houses, and may work with suppliers in design-for-manufacture activities, but for these firms direct control over the design process is critical. The only upgrading capability they encourage is the development of what is called corner engineering in the automotive sector, that is, the development of modules of larger products whose core design appearance is controlled by the final retailer.

A final form of functional upgrading which is sacrosanct to buyers is the buying function itself. This is the source of their competitive advantage and every effort is made to block suppliers from developing expertise here.

The South African wood furniture value chain

The furniture industry is badly served

During the past 150 years, South Africa's diverse indigenous forests have been destroyed although there are currently extensive plantations, predominantly of commercially cultivated pine. In addition, there are large plantations of eucalyptus hardwood species such as saligna, which were established to provide prop-shafts for the mining industry. Almost all of the materials used by the furniture industry in South Africa are sourced domestically, with the exception of a small quantity of imported hardwoods. But the furniture sector uses only about 12 per cent of domestic timber, making it a small user group with little influence over production.⁸

Three large groups dominate saw milling, one of which is a parastatal (which in 2001 was in the process of being privatized). The other two groups have sizeable investments in paper and pulp. The saw-milling technology used is old, since most new investment has gone into paper and pulp, which has higher profit margins. Consequently, the furniture industry is badly served with respect to input quality and flexibility, and delivery reliability is poor. There are also about 300 informal sawmills, usually referred to as bush mills, which play an important role in meeting niche market demand.⁹ Approximately 68 per cent of softwood sales in 1999 came from formal sawmills, with the remainder from the low-cost mills.¹⁰

The dominance of large firms

Large firms traditionally have dominated production activities in the furniture sector in South Africa (Table 6). Average plant size (as indicated by the number of employees) in the early 1990s was more than twice that of the United Kingdom (which itself was characterized by large firms when compared to Italy, the Benelux countries and Scandinavia). This is true not just for production, but also for retailing (Table 7).¹¹ To compound matters, two conglomerates have interests, which span forestry, paper and pulp production, furniture, furniture fixtures and retailing.

This pattern of concentration may affect the upgrading capacity and performance of furniture firms for various reasons. First, as with many firms which grew under the protectionist mantle of import-substituting industrialization, the range of products made was large. Consequently, firms tended to be unable to concentrate on areas where they had distinctive competences, a first and important step in the upgrading trajectory. Second, they concentrated on the large batch production of standardized items, and therefore failed to develop the capacities to design and change their product portfolios. Finally, competition in the retail sector took a particular and distinctive form, in that it centred on the provision of hire-purchase finance for consumers.¹² Competitive energies were focused on access to financial markets, rather than on product innovation. At the same time, the provision of finance to low-income markets was such that product design capabilities were unimportant. Consequently, as the economy began to open up to global

⁸ IDC (1998).

⁹ Ibid.

¹⁰ South African Lumber Index (January 2000).

¹¹ Kaplinsky and Manning (1999); Dunne (1999).

¹² Kaplinsky and Manning, 1999.

pressures from the early 1990s, there was no basis for sustained upgrading emanating from domestic buyers.

Table 6 International comparison of industry structure by size of firms¹³

Country	Year	Percentage of establishments by size (No. of employees)		
		<20	20-99	100+
Sweden	1992	92.5	6.2	1.1
Germany	1987	89.3	-	10.6
Mexico ^a	1987	86.9	11.2	1.9
Republic of Korea	1988	77.0	20.5	2.4
Italy ^b	1986	75.1	18.0	6.8
Brazil	1985	71.6	23.4	1.1
United States of America	1990	70.7	23.9	9.7
South Africa	1993	67.6	26.0	6.3

Source: Dunne (1999).

Notes: ^a The Mexican data use 16 workers as the cut-off point for small firms. ^b The Italian data distinguish enterprise size categories as follows: 1-49; 50-99; >100.

Table 7 Concentration in furniture retailing (per cent of sales), 1996

Country	Large chains	Independent retailers	Top 3 retailers	Largest retailer
United States of America	35	50	..	..
Sweden	..	..	18.6	7.7
Netherlands	..	..	10.3	6.3
France	60	26.5	30.4 ^a	11.7
Italy	3.4	75.7	2.9 ^a	1.1
Spain	22	..	16.6 ^{+a}	4.7
United Kingdom	31	..	20.5 ^a	9
Germany	79	6.6	19.5	7.5
South Africa	90	10	60	25

Source: Kaplinsky and Manning (1999).

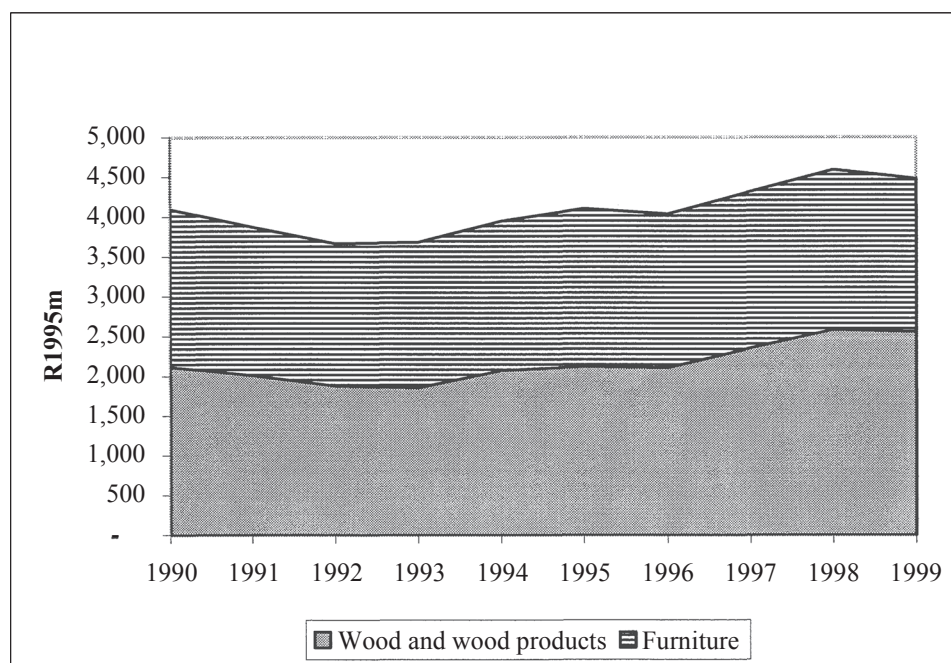
Note: ^aTop 5 retailers.

Production and trade The 15 years before political transition in South Africa was a period of declining income per head, and it was only after 1995 that GDP growth began to catch up with population growth. It is not surprising, therefore, that the value of sales in the wood and furniture value chain was essentially static during the 1990s, although it did show a small rising trend in the second half

¹³ Note that the size categories used here to define small, medium and large enterprises are different from that used by the government of South Africa. However, in order to compare international data more effectively, the classification used by Manning (1996) has been utilized here.

of the decade (Figure 8). A similar pattern can be observed both for value added (Figure 9) and for employment (Figure 10).

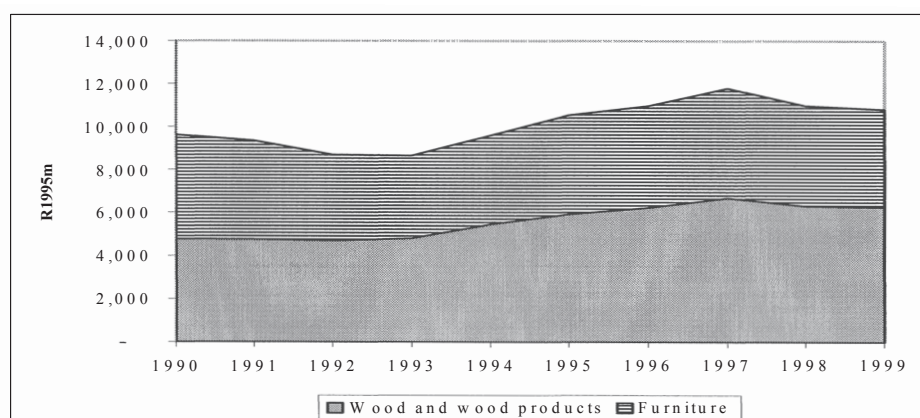
Figure 8 Value of output in wood and wood products, and in furniture, South Africa, 1990-1999



Source: IDC (2000)

Note: R1995m refers to million rand in 1995

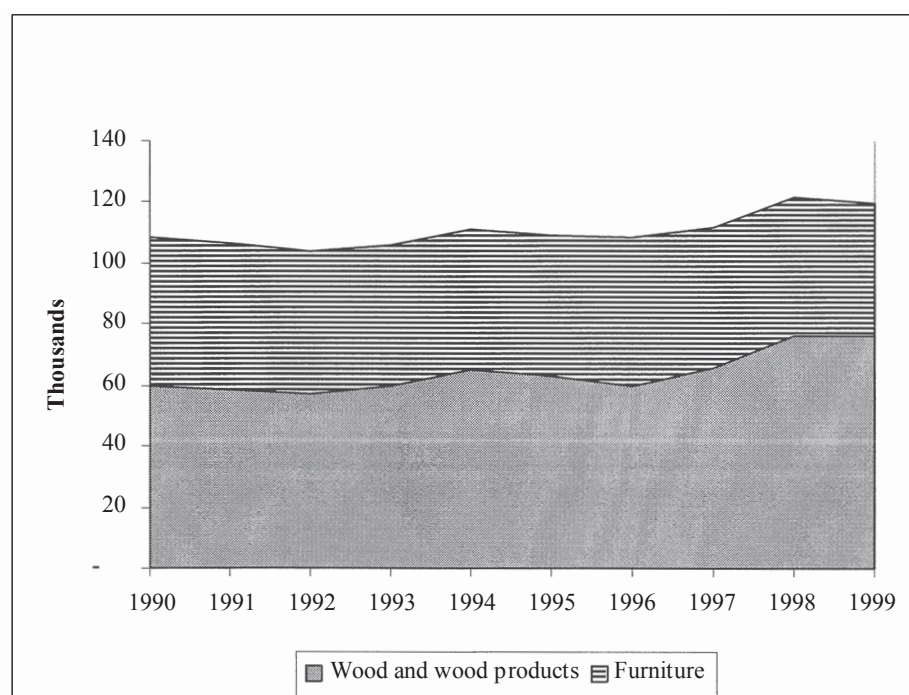
Figure 9 Value added in wood and wood products, and in furniture, South Africa, 1990-1999



Source: IDC (2000)

Note: R1995m refers to million rand in 1995

Figure 10 Employment in wood and wood products and furniture, South Africa, 1990-1999



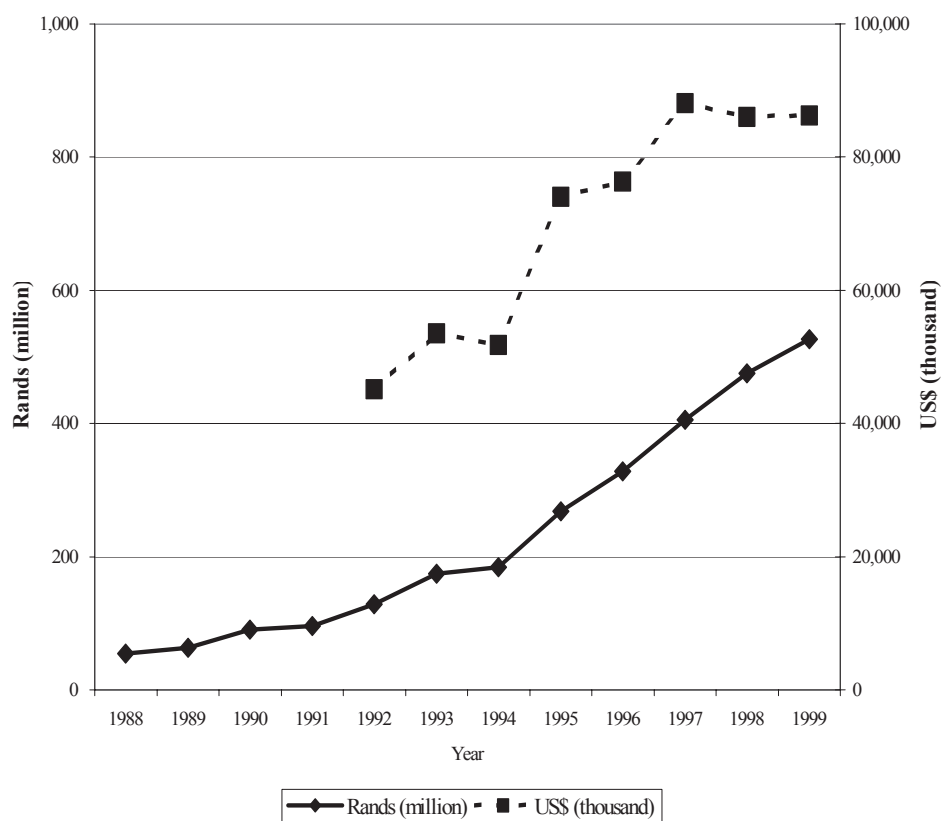
Source: IDC (2000).

Exports rose in the 1990s

During the 1990s the value of furniture exports (in domestic currency) grew almost tenfold, from around R54 million to R526 million (Figure 11). However, since the rand was a depreciating currency, the US\$ value grew more slowly, from US\$45 million in 1992 to US\$86 million in 1999. However, this dollar export growth was confined to the immediate aftermath of political transition, and indeed exports fell from a peak of US\$88 million in 1997.

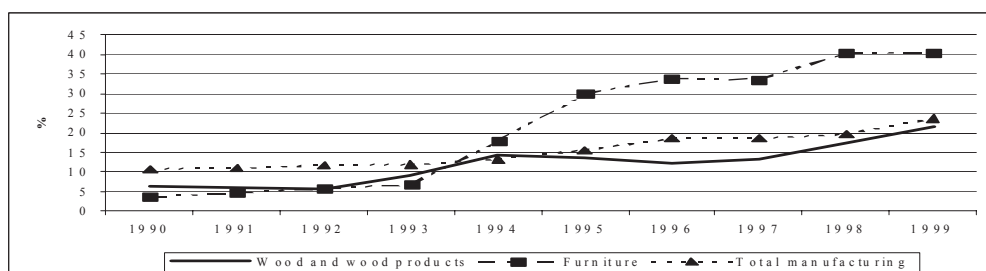
Growing exports in the context of static output meant that their share in furniture sales grew rapidly, from less than 5 per cent in 1992 to over 40 per cent in 1999 (Figure 12). (The divergence between these ratios—that is, the export/sales ratio grew faster than the US\$ value of exports and value added in this sector—can be traced back to the fact that the depreciation of the rand against the US\$ was greater than the rate of domestic inflation during this period.) This far exceeded the export/sales ratio in either wood products or in the manufacturing sector as a whole. It would appear, therefore, that the South African wood furniture industry had become an increasingly effective participant in global markets and that foreign demand was its most dynamic component.

Figure 11 Furniture exports, South Africa, 1988-1999



Source: IDC (2000).

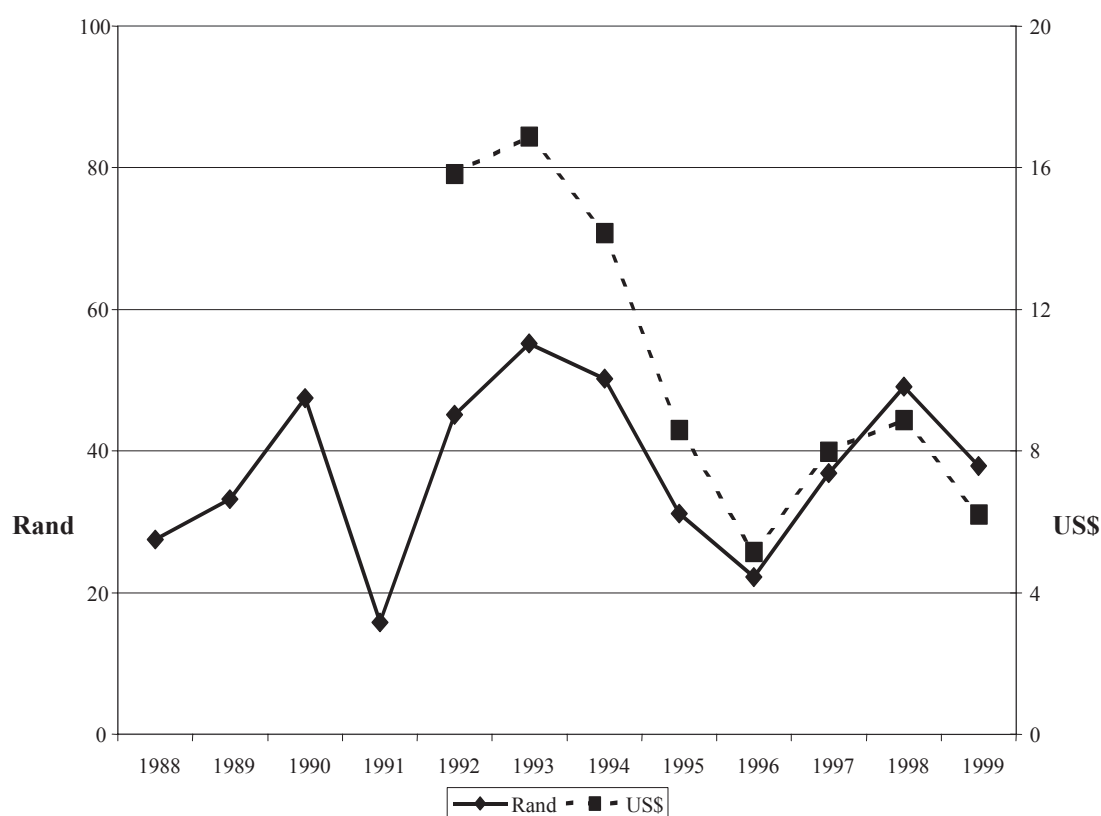
Figure 12 Share of exports in sales, wood and wood products, furniture and total manufacturing, South Africa, 1990-1999



Source: IDC (2000).

However, participation in the global economy does not in itself guarantee sustainable income growth, and it depends critically on how producers are inserted into global production networks. Figure 13 suggests that South Africa's wood furniture value chain may be on a sub-optimal trajectory, since the unit prices of its exports, measured in US\$, fell by 250 per cent between 1992 and 1999. This was a much greater fall than that experienced by all furniture imports into the EU during the same period (28 per cent), and even greater than for all wood imports into the EU (10 per cent).

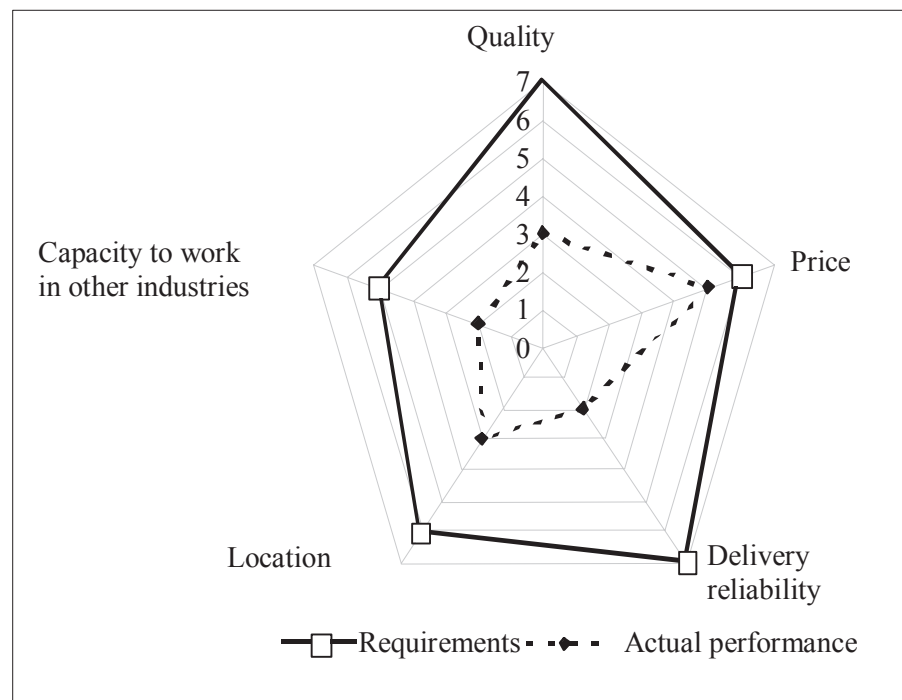
Figure 13 Average unit price of wood furniture exports from South Africa, 1998-1999



Source: IDC (2000).

This gloomy aggregate picture is confirmed by interviews with a European company sourcing wood furniture from South Africa. The firm was asked to identify its critical requirements when buying from suppliers, and to rate each of these factors on a scale of 1-7, with 1 being least important and 7 most important. It was then asked to rate the performance of its South African suppliers. Here the competitive shortfall was significantly larger than that observed for suppliers from other countries. Data show that South African producers are only staying in the market by virtue of price competitiveness, since their quality and delivery reliability were poor, they were distant from final markets and showed little capacity to develop related capabilities in other sectors.

Figure 14 Buyers' perceptions of capabilities of South African suppliers



Source: Company interviews and survey results by authors.

The upgrading challenge confronting the wood and furniture value chain in South Africa is clearly urgent, and is symptomatic of a more general challenge facing not just other furniture exporting countries, but those of all producers participating in global markets.

Realigning value chains: the value chain for saligna wood furniture in South Africa

Little external help

A survey conducted during the late 1990s showed that external buyers have assisted only one South African furniture producer in its upgrading operations.¹⁴ This one exception was a firm, which supplied furniture for IKEA. However, IKEA decided in 2000 to move out of South Africa to Eastern Europe and East Asia and there seems little prospect of sustained upgrading activities by external buyers in the future. It is also significant that upgrading assistance by this global buyers was limited to process capabilities, and explicitly excluded the design sphere. And now that IKEA has moved out of the country, no external upgrading assistance exists.

¹⁴ Dunne (1999); Fakude (2000).

With little or no external help, the onus of upgrading falls on domestic producers and manufacturers. And the lessons that can be learnt from efforts to upgrade the hardwood component of the South African wood furniture value chain are relevant not just to that country, but to all participants in global value chains.

The opportunity One of the key market drivers in the global timber products industry is growing environmental awareness, primarily in industrialized countries. For most developing countries, this threatens exports because their timber industries have traditionally drawn on indigenous hardwood forests. South Africa, however, is uniquely placed to take advantage of this trend as it grows *saligna*, a species of eucalyptus hardwood, on a commercial basis, whereas other hardwoods grow in indigenous forests in the developing world. Although *saligna* is not a traditional hardwood, it can take colouring well and be treated to look like almost any wood, including all species of threatened hardwoods.

Traditionally *saligna*, a semi-hardwood, was grown for use as pit-props in the local mining industry, but the change to concrete mining supports has led to a sharp decline in domestic demand.¹⁵ In the context of growing environmental concerns in final markets, therefore, the existence of the previously low-priority *saligna* hardwood plantations, with underutilized capacity, offers unexpected potential for exporting furniture to Europe and North America. It also provides an opportunity to move furniture products into new market niches, with higher unit prices.

The upgrading challenge Grasping this opportunity requires a change of focus from the previous direction of the wood furniture value chain, which has traditionally concentrated on the export of pine furniture into increasingly price competitive markets. But this change of direction requires the capability to upgrade in the four trajectories, that is, process, product and functional upgrading and moving value chains.

Process upgrading The main challenge in process upgrading was to increase the supply of clear *saligna* hardwood, at an affordable price. The problem was both because of competing uses (in paper and pulp) and because the sawmills were geared for cutting softwoods (pine) rather than hardwoods (*saligna*). The mills had also operated in a sellers' market for many years, and consequently were unresponsive to manufacturers' needs, delivering at unpredictable intervals, with varying quality and inconvenient "take-it-or-leave-it" product specifications. An additional problem was that manufacturers had to learn how to work with *saligna* and, to be effective, this required close collaboration with the sawmills (for example, regarding knowledge about timber density). Perhaps most importantly, the key determinant of price was the gestation period of the trees. Traditionally, *saligna* was cut after 23 years, but it was thought possible to reduce this to around 12 years, which would bring significant financial benefits given the high interest costs (a real interest rate of more than 10 per cent). However, such a course of action required the collaboration of growers, sawmills and manufacturers (see below). Thus, process upgrading could only be achieved through a combination of firm-specific innovations and inter-firm collaboration to improve communication and to address important chain-specific problems.

¹⁵ *Finance Week* (9 July 1999).

Product upgrading Process upgrading alone would not give sufficient benefits to make the upgrading of the furniture chain possible. Alternative uses for saligna in paper and pulp production meant that unless the final furniture products could be positioned in a higher product niche than exports of pine furniture, the manufacturers would not be able to meet the market price for the timber input. An additional challenge was that the specific properties of saligna, and especially of young saligna, meant that designs for pine furniture could not always be used. Product redesign was therefore necessary and required many furniture manufacturers to venture into new territory, but this could not be done in isolation from the sawmills. Finally, one of the virtues of saligna is its ability to absorb finishes. This required manufacturers to liaise closely with lacquer and paint suppliers, particularly because environmental pressures in Europe are forcing a move to water-based finishes (one of the main areas of competitive advantage of Italian producers).

Functional upgrading If new designs were to be introduced, who would be responsible for this high value-added activity? Would the saligna industry follow the pattern of the pine industry, where global buyers provided design templates for manufacturers, or where manufacturers continued to produce standard items such as garden benches? Alternatively, would there be a surge in domestic design capabilities, and if so, would these be lodged in buyers from South Africa, furniture manufacturers or in specialized design houses?

Moving to a new value chain There was also the question of whether, just as saligna furniture represented a transition within the wood furniture chain from softwood to hardwood, there were opportunities to move from saligna furniture to other saligna-based products such as garage-doors (a big export item), industrial products and toys.

Table 8 The upgrading challenge

<i>Type of upgrading</i>	<i>Specific challenges</i>
Improving process efficiency	Furniture firms learn to work with saligna Improvement in overall manufacturing efficiency Learning to use young trees Better coordination of deliveries Different product specifications for raw timber Improved and consistent input quality Human resource development
Introducing new products or improving existing products	Designs suitable for saligna wood Design for manufacture Learning to utilize new and environmentally friendly lacquers and paints
Functional upgrading	Increasing domestic design content, within individual links or in collaboration between links and with the national system of innovation
Moving to a new value chain	Moving from pine to saligna furniture, from furniture to doors and from doors to industrial products and toys

The existence of upgrading opportunities does not mean that these opportunities are necessarily taken. Indeed, various parties including the Department of Trade and Industry, the National Productivity Institute and the Industrial Development Corporation had long campaigned for a restructuring programme, including adopting elements of a chain-perspective, but no action was taken. Some stimulus was required to spur firms into action and it now came from both timber users and suppliers.

From the users' point of view, there were pressing problems. The prices offered for pine furniture by global buyers were plummeting, and few producers could meet them without sinking into non-profitability. Saligna-based products offered the opportunity to sidestep these competitive pressures, since it would be a low-cost and environmentally acceptable alternative to increasingly scarce and highly priced traditional hardwoods such as teak and mahogany. Meanwhile, saligna suppliers were seeing a shift in market demand. The maturation of saligna plantations coincided with a decline in demand for mining pit props. This created an unexpected surplus and both timber growers and millers had to find new markets.

Hence, the value chain restructuring initiative came from a combination of external and internal (national) pressures. Within this, although the stimulus to change emanated from both ends of the chain, it was the changing perspective of the sawmills that had the greatest impact. Previously, they had held the rest of the value chain to ransom, controlling as they did the quantity and quality of timber supplied to the manufacturers. In the pine value chain, they had even blocked attempts to promote efficiency. Now it was their need for change that allowed the saligna restructuring initiative to proceed. This provided the foundation for a strong sense of interdependence to develop among the participants in the value chain.

This willingness to be seen as part of a whole, induced by emerging over-supply in both product and input markets, was a critical first step in improving the possibilities for cooperation along the value chain. However, translating an awareness of the need for interdependence into actual cooperation with mutual benefits for all value chain stakeholders, as well as overcoming long-standing barriers, is difficult. The next section details the process of promoting cooperation along the saligna value chain. From this can be seen which forces facilitated or blocked the process, while lessons can be drawn from the successes and the failures.

The initiative The Industrial Research Project (IRP) organized the first Saligna Network Workshop in late 1998. This was a joint project between the School of Development Studies at the University of Natal and the Institute of Development Studies at the University of Sussex (United Kingdom). The workshop attended 26 delegates, including representatives of government departments, manufacturers, timber traders, industry specialists (both academic and consultants), and timber growers and mills. It brought together stakeholders from all parts of the saligna value chain with a view to promoting cooperative problem resolution. From the outset, the interest group was driven by a value chain approach. The facilitators stressed the importance of this for international competitiveness, as well as the need for interdependence between the various parts of the chain in order to achieve vertical and horizontal collective efficiency.

The group needed to resolve the two key issues of the supply and export potential of saligna timber products and it focused on practical problems and mutually beneficial solutions. Three key linkages in the value chain, which posed particular problems for vertical efficiency were identified, and small groups with participants from each side of the problematic link were created to identify the principal issues. This ensured that participants had a real opportunity to air their grievances and hear those of others. The involvement of several competing firms at each level of the chain created a situation where failure to cooperate held the risk of missing benefits enjoyed by competitors. Finally, stakeholders were encouraged to participate in the group discussion that related most closely to their own needs. However, the information and benefits were made accessible to all participants in plenary session.

The Saligna Value Chain Group is born and—

These efforts proved highly successful and the workshop gave birth to the Saligna Value Chain Group (SVC Group), a cooperative national network of stakeholders spread throughout the chain, coordinated by the IRP, which bore all coordination and meeting costs. Members were only responsible for costs associated with attending meetings. The SVC Group comprised:

- a. timber growers, primarily the large companies that also owned the saw-mills, but also some small plantation owners;
- b. the two large corporate saw-mills plus a small independent saw-miller;
- c. timber product manufacturers spread across the product spectrum, varying in number varied with each meeting, but with at least eight forming the hard core;
- d. the two key government departments concerned with plantations, water supply and manufacturing assistance;
- e. a member of the export council;
- f. two institutions claiming a specialized assistance role in the industry (a consultant with a loose attachment to one of the firms, and a semi-government research organization), interacting with the group on a more intermittent basis and without a definite role;
- g. members of the IRP, including researchers who had had successful experience with value chain upgrading in the auto-components sector.

The SVC Group set up technical working groups to examine problems, which were agreed to be critical to the value chain's performance. Each group was coordinated by a member of a firm in the value chain, which helped to spread the responsibility of internal change beyond the original initiators. The working groups were charged with tackling, through research and experimentation, selected discrete issues. Their brief was to report on how to deliver tangible benefits in their specific sphere. The external intermediaries took no responsibility for the practical work of the working groups, except to act, if called upon, as the communication point between a working group and the broader SVC group.

—technical working groups were set up The initial three technical working groups spun off a number of different groups trying to solve problems and report the results back to the main value chain group. They essentially revolved around the two big issues that brought the participants in the SVC Group together in the first place, namely:

- a. how to maximize the quantity and quality of the saligna timber supply;
- b. how to maximize current marketing as well as upgrade their products by focusing on design and branding.

Some manufacturers saw that the issue of design and marketing was the key to upgrading, by introducing new products, improving old ones or upgrading through changing the mix of activities. However, the issues of quantity and quality of supply dominated the activities of the technical working groups as well as the plenary discussions of the entire group. This was not surprising since the supply issue (in order of priority):

- a. was the major concern of the timber mills, which exercised the real power in the SVC Group, and whose participants dominated the technical working groups;
- b. was perceived as the pre-eminent problem for timber product manufacturers;
- c. allowed manufacturers to avoid confronting the more difficult issues of increasing the efficiency of their internal production processes;
- d. seemed to require resolution before tackling new design, branding and marketing strategies.

The supply issues spawned overlapping technical working groups dealing with the six related challenges.

The product matrix group This group was concerned with establishing the timber requirements of the various user groups, as understanding their needs and meeting them more precisely could improve recovery rates. The group grew out of manufacturers' criticisms of the timber provided, claiming that it came in the wrong (imperial) sizes and that they needed it in metric measurements. The mills' response was that they had never been told this, and had therefore continued to cut to the old measurements. The ramifications of this were enormous. Not only did the raw material supplied create lower wood recovery rates, it also affected production, and had a knock-on effect on design and marketing. Manufacturers were trying to fit their designs to the timber supplied rather than producing optimal designs for marketing and manufacturing—the tail was wagging the dog. The group, which was led by the sawmills, worked on a variety of issues. A questionnaire was sent to all timber product customers to try to establish optimal sizes and to get consensus on a range of dimensions. The mills then experimented with new grading systems to see if this would increase the total availability of clear wood. The mills also provided selected manufacturers with uneven lot sizes, using second millruns and random widths, and the manufacturers cut their own wood sizes to see if this could maximize recovery rates. They also began to collect accurate data on total demand and availability in order to determine the existing and potential supply and usage of saligna in South Africa.

The young trees working group A major problem was the length of time a saligna tree stayed in the ground before it was cut. Here the interest of millers and manufacturers seemed to be diametrically opposed: the shorter the length of time before felling, the faster the return on capital for the growers and mills. The older the felled tree, the better the quality and density of wood for furniture manufacturers. Mature saligna trees tended to be felled only after 20-25 years. The mills asked the manufacturers what were the real disadvantages to using younger trees of 8-16 years old. This would address the shortage of pine and other traditional woods (as of 2000) and potentially make it more profitable to focus on saligna for timber products. The mills provided certain manufacturers in this technical working group with young, much rougher, timber of around 8-10 years old. The manufacturers then experimented with using it for different products as well as with its partial usage in a product. Success was relative. The manufacturers using saligna for high value-added interior furniture found little problem in integrating the young timber into their product. However, this was not the case for those manufacturers who used saligna to produce lower value-added garden furniture. They required much older, stronger timber to withstand the climatic effects of the European outdoors.

Density and grading These working groups looked at another issue relating to the possible use of less dense timber, that is younger trees and certain parts of older trees, trying to identify what densities are suitable for which uses. The manufacturers again experimented with creating possible prototypes with different densities and the mills experimented with different grading systems to identify more clearly the relative densities of the wood provided. The experiments followed a similar pattern to those with the young timber. Successfully introducing lower-density timber would require a better grading system, as less dense timber is only suitable for specific applications, and could prove disastrous for saligna's quality reputation if used for the wrong application. Better grading would also help to improve the recovery of "clears" (that is, wood without knots).

The imminent intended privatization of the state-owned forests with their large expanses of saligna plantations had major, potential, implications for nearly all parties within the SVC Group. The state-owned company and the government department responsible were intending to sell the plantations in one lot to a single buyer. The manufacturers saw this as potentially bringing on stream untapped supplies of mature saligna. However, there was also the possibility of the new buyer adopting a single and easy approach to the plantations and sending all the felled timber to the chipping and pulping mills. The small independent growers and sawmills wanted the opportunity to bid for the state-owned plantations and viewed the terms of the tender as discriminatory. The large corporate saw-miller, which focused on board timber but did not own much plantation land was concerned at being unable to gain access to this newly available resource. The plantation and saw-milling company most likely to win the bid, whose timber product division representatives were involved in the SVC Group, had its own internal problems. The representatives were concerned that, if the SVC Group could not provide cogent alternative reasons, their parent company, dominated by the pulp and paper divisions, would adopt the easiest route of sending most of this pristine timber for chipping, export and pulping.

This was the only technical working group to be led by the external intermediaries, who attempted to coordinate the SVC Group's response and use their own economic expertise, political contacts and influence with the

government department most directly involved in the privatization process. Apart from making the parties involved more aware of the various possibilities, they had little direct impact on the process. It did, however, throw up weaknesses in the SVC Group, which will be discussed below. Unless manufacturers could upgrade their products, they would not be able to pay the price required to outbid other final users of saligna, namely chipping and pulping plants. In addition, following from this, was the SVC Group in a position to speak for all other manufacturers on a price increase? This created an impasse, as the group was too small to speak for the industry as a whole, while there were divisions among the manufacturers themselves between higher-value-adding producers making good-quality furniture and those making lower-value-added garden furniture. However, it also revealed the power of value chain analysis, for in identifying the various value chains it showed other uses for saligna very clearly.

Exporting profile As well as tackling the link between the mills and the manufacturers at the production end of the value chain, the SVC Group also addressed the major issue of the profile of furniture exports – essentially this effort centered on upgrading the design, branding and marketing activities. However, despite setting up technical working groups along similar lines as those concerned with supply issues, little progress had been made as of 2001. A design and branding working group composed of manufacturers and the government-based export council representative produced few concrete results. A second initiative was a marketing exercise undertaken by a technical working group, which made a presentation at the 2000 Cologne Fair. All the manufacturers in the group pooled their resources and with the Department of Trade and Industry's assistance presented a joint platform of manufacturers and government at the fair. This had mixed results. Garden furniture dominated and it was undifferentiated in design and product. Manufacturers were copying each other rather than cooperating to produce a distinctive and differentiated design brand.

Embryonic industrial clustering Finally the SVC Group also provided a spur to an embryonic cluster of three furniture manufacturers, which operated in different segments, addressing the upgrading of their internal production processes, organization and layout so that they reached world-class standards. This group had considerable success by facilitating their learning experiences through company visits and sharing information about world-class-manufacturing processes with industry experts. The firms' experiences were passed on to manufacturers in other sectors by the IRP for the Department of Trade and Industry.

Why did the SVC initiative get off the ground? As mentioned earlier, the first tentative attempts at value chain restructuring predated the SCV initiative. But the process of cooperation was slow, failing to advance much beyond bilateral talks between various manufacturers and individual mills. Indeed it was only when external assistance was sought that the preconditions for cooperation could be realized. Two participants at the IRP workshop, which focused on the need for industrial restructuring to achieve international competitiveness and was based on the principles of working closely with industrialists, were manufacturers involved in the use of saligna. They were eager to promote cooperation along the saligna value chain and seeing the close relationship between the principles of industrial restructuring being promoted and their own goals for the saligna value chain, they suggested that the researchers facilitated a saligna interest group.

The combination of external intermediaries and internal change agents (manufacturers and millers) was critical in arranging the first saligna workshop. Although it required an external agent to help overcome trust barriers, the support of key internal agents gave credibility to the process and encouraged stakeholders to see the proposed workshop as offering the possibility of delivering real benefits. Industry supporters of cooperation played a vital role in publicizing the event, and invitations from the intermediaries were noticeably more effective when industry supporters had already broached the subject of a saligna network with the invitee. Other external attempts to get manufacturers in the South African timber products sector to work cooperatively have struggled to get off the ground, or have failed entirely. This can be attributed largely to the fact that these were policy-driven programs imposed on the industry from the top down. Experience in South Africa has shown that even the offer of financial incentives is not enough to encourage firms to cooperate. In poor trust environments it is extremely difficult to encourage cooperation through policy support mechanisms unless there are key industry players prepared to champion the cause of cooperation and network building.

The support of key players is vital—

Equally important was gaining initial support from key players at all levels of the value chain, in this case specifically the saw-mills as well as the manufacturers. A restructuring network requires a critical mass of relevant stakeholders before it can be successful. Position in the value chain, size of firm or simply interest in finding solutions to a particular problem may define the appropriate number of stakeholders. However, unless enough of the right stakeholders to effect change are involved, the network is unlikely to get beyond the theoretical stage.

The historical lack of trust in the sector created a particular challenge for the IRP research team. Their main role as external facilitator was to mobilize, coordinate and sustain the dynamism of existing value chain support for the process, but they also had a vital role to play in building the trust necessary for cooperation. It was important that the local and international members of the research project:

- brought international expertise and status;
- had established some level of credibility within the furniture sector and a number of other key local manufacturing sectors;
- were able to use this credibility to leverage top-level support from the two key government departments (trade and industry, and water and forestry), which in turn strengthened the image of the process within the saligna value chain;
- were clearly neutral, which was critical in involving the whole chain for, despite a positive attitude towards cooperation, lack of trust and general suspicion about motives remained an issue.

—as are intermediaries with expertise

Through the involvement of neutral intermediaries with real expertise, as opposed to simply facilitative skills, the SVC Group was able to avoid becoming (or appearing to become) an initiative designed to favour a particular stakeholder or group of stakeholders. This was a real danger, as the saligna manufacturing sector was dominated by small firms, unable to take on the logistical burden of organizing such a group. At the same time, given the

prevailing negative sentiments towards the sawmills, traditionally seen as wielding undue and unreasonable control over the industry, a group organized by them would have been viewed with considerable suspicion by manufacturers. The two mills primarily involved in supplying the saligna sub-sector are positioned as rivals, and an interest group facilitated by one would be unlikely to attract the support of the other.

Did the SVC Group have any lasting momentum?

The upgrading results of the SVC Group up to 2002 have been felt in the first three of the upgrading trajectories, that is, process, product and functional upgrading. The issue of upgrading through shifting core competences to another value chain has not been on the agenda. However, the impact of these efforts has been mixed. Although there are advantages in SVC Group members defining the agenda, there are also disadvantages since their immediate concerns and preoccupations are not necessarily targeted at the correct points. Furthermore, some agenda concerns that have been raised have been used to disguise efficiency weaknesses that firms do not want addressed.

In roughly the order of impact, the activities of the SVC Group have yielded the greatest gains in terms of:

- generating efficiency and upgrading information in all three of the trajectories;
- enhancing inter-firm process and supply chain efficiency between the mills and manufacturers;
- product development within and between linkages through the young tree and wood density experiments;
- internal firm process upgrading, usually technical;
- some, although on the whole unrealized, gains in changing the mix of activities both within firms and up the value chain through emphasizing design, finishing and marketing.

There was some internal production upgrading

Upgrading the internal production processes of the firms in the value chain was not an explicit aim of the SVC group. However, work on the supply issues between the mills and the manufacturers did have an impact on manufacturers' internal production processes, through challenging the technical parameters of what could be produced. With the exception of the cluster of the three furniture firms (see above), which essentially operated alongside, rather than within, its institutional framework, the SVC Group did not, by and large, challenge the participant firms directly in terms of intra-firm production processes, particularly in relation to operational efficiencies and world-class manufacturing processes. It could be argued that the producers, with the exception of one manufacturer, avoided the issue of efficiency, using the mills' initial enthusiasm for the SVC Group and their willingness to accept responsibility for past problems to shift the focus away from this critical upgrading area.

Another problem was that the emphasis on the insufficient supply of saligna logs and consequent attempts to influence government privatization plans obscured a fundamental weakness in the structure of the saligna timber products value chain. Manufacturers tended to treat the supply issue as a

logistics problem, coupled with the failure of the government and the plantation/milling conglomerates to perceive the potential for building a long-term sustainable saligna hardwood manufacturing export sector. While there is some truth in this view, it masks a fundamental economic reality also driving the process.

The price of sawn saligna timber supplied to the manufacturers is too low to make it worthwhile to direct supplies away from chipping and pulping logs. Although exact figures are not available, the mills' argument that if the price were higher the sawn timber would become more available has some cogency. As of 2001, the mills are able to get as good a return by simply pushing the logs most valuable to the manufacturers through their huge paper pulping operations. The reason for this is that the timber products manufacturing sector is dominated by too many firms engaging in low-value-added activities pitched at the bottom end of the market. Saligna is being used as a cost reducing, not a value-adding, resource. For many firms, it is the cheapness of the wood that counts, and the final products have little high-quality design, hardly any value-adding branding and insufficient emphasis on finishing.

Consequently, the greatest upgrading weaknesses of the SVC Group thus far can be summed up in its failure to:

- a. tackle intra-firm process efficiency through lowering operating costs and increasing operational efficiency to world-class manufacturing standards;
- b. shift the mix of activities within firms towards a greater emphasis on high-quality finishing and original design;
- c. create supporting collective design and export marketing activities.

In terms of the four trajectories of upgrading being considered here, greatest progress was made in inter-firm process upgrading; there has been marginal progress on intra-firm process upgrading and almost no progress on either product or functional upgrading.

Conclusions: lessons for public policy

The general lessons from this case study of creating cooperation along a value chain fall into two broad areas:

- a. those concerned with the creation and maintenance of the SVC Group and their potential application to other value chains;
- b. those concerned with the four upgrading trajectories identified as a result of being able to establish value chain cooperation.

The key lessons about vertical (supply chains and customer relationships) and horizontal (clusters of similar firms, such as competitors) value chain cooperation learnt from the study and which could potentially be applied to other value chains are as follows.

Value chain cooperation External crisis plays a critical role in getting both people and firms to look beyond individual interests towards value chain cooperation. However, firms tend to be risk-averse and cooperation is essentially a risky undertaking, particularly in environments where trust is poor—hence the importance of opportunity going hand in hand with crisis. Firms are more likely to overcome their risk-averse tendencies and to see networking as a real and viable alternative if a crisis contains the possibility of opportunities in a positive market environment.

Trust can be created even in societies with historical levels of antagonism. In South Africa there has been little trust between social groupings, individuals and organizations and there is considerable cynicism about the benefits of cooperation. If trust can be created in these conditions, then there are important implications for network creation in other more conducive social environments.

Dominant lead firms that are able to play an authoritative role are important for creating and sustaining value chain cooperation. In the case of the saligna value chain, the involvement of the mills and their willingness to play a leading role in the technical working groups has been of major importance in maintaining the SVC Group's dynamism.

An internal change agent must be willing and able to play a catalytic function within a value chain if cooperative efforts are to work. The concept and benefits of cooperation were enthusiastically promoted by a small number of saligna furniture manufacturers from the beginning. They held bilateral discussions with key suppliers, and secured their support for the idea of value chain cooperation. They helped to give the process credibility with industry stakeholders and encouraged firms to participate.

External intermediaries, who gain respect because of their knowledge of the industry, have a critical role as facilitators in overcoming internal conflicts, jealousies and mistrust. Their ability to be neutral brokers, mediate network cooperation and draw together the disparate interests of the players along the saligna value chain is not to be underestimated. International experience has shown that networks can and do form spontaneously. However, where purposive action is required, neutral intermediaries that can be trusted by all parties play a crucial role. Finally the amounts of energy and resources that are required for the administration and coordination tasks necessary in establishing and maintaining a sustainable network should not be underestimated.

Collectively accessing the ear of government plays an important part in generating and sustaining interest in value chain cooperation. Initially the external intermediaries did this. However, the possibility of collectively accessing government through the SVC Group gradually created its own dynamic.

Practically oriented activities encompassing selective incentives and practical benefits are crucial in creating the sustainability of value chain cooperation. It needs to be clearly focused on broadly recognized problems that are within the scope of the group to address. Reaping tangible benefits as soon as possible is a useful way of improving a project's credibility and breaking down barriers. Therefore, the external and internal agents should help the chain set achievable targets. Value chain restructuring will never occur in one

leap, but rather through a series of linked improvements. For the same reason, unless there are sustained real improvements, firms' willingness to participate on an ongoing basis will decline rapidly. The technical working groups set up by the SVC Group created the initial dynamic and sparked the participants' enthusiasm and interest. They clearly owned the process even if they did not pay for it, as administrative costs were born by the research group, but whether this is sustainable in the long term is not yet clear.

There is a number of big hurdles that the SVC Group has to overcome: First, it is not clear whether it has generated sufficient incentives to keep it going beyond the honeymoon phase of the first two years (1999-2001). Secondly, the inability of the external intermediaries to lock in the participants financially (making them fee-paying members) may threaten its long-term sustainability. Thirdly, the inability to increase the manufacturing base of the membership so that it represents the critical mass of the value chain is a major concern. In its current form the lack of a critical mass of manufacturers in the SVC Group means it does not have an important sanction: exit from the group will result in a loss of access to critical selective incentives. However, the lack of critical mass of manufacturers is counterbalanced by the dominant role of the mills in the value chain.

Information flows play an important role in creating and sustaining value chain cooperation. This goes beyond lowering the transaction costs of information for any particular member of the value chain. In many cases the information generated from the technical working groups, together with the expertise that the external intermediaries brought to bear, created information flows in the SVC Group where none had previously existed.

Upgrading trajectories

The upgrading framework presented above stressed four upgrading trajectories, which were relevant to the internal operations within firms as well as the links between firms in the value chain. Hence upgrading in any one of the trajectories could take place by altering the value chain relations and not necessarily restructuring the operating or technical parameters of the individual firms.

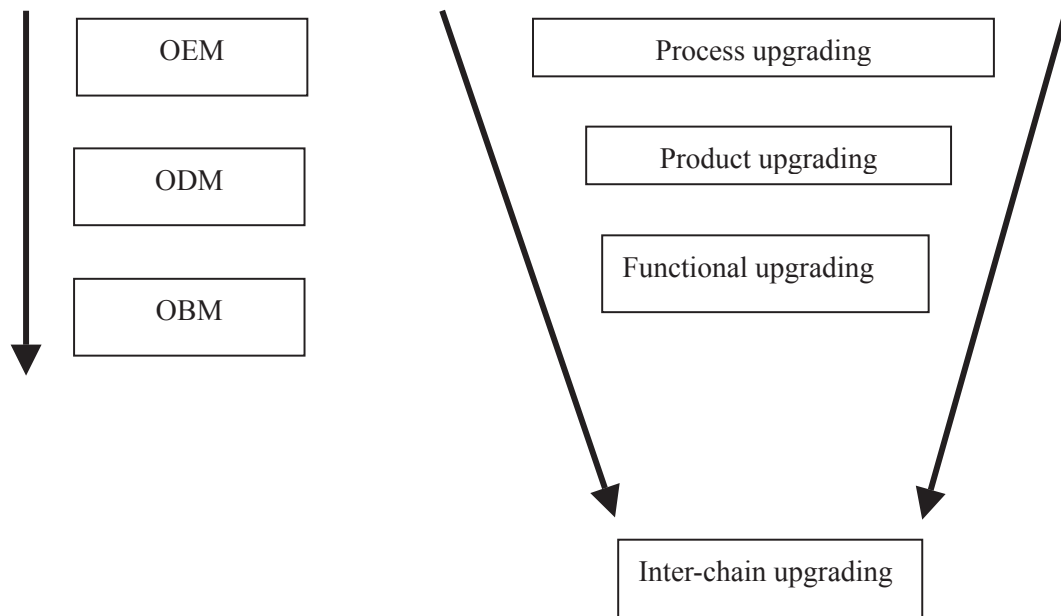
The experience of the SVC Group was that restructuring, both within and between firms, was most effective in inter-firm process upgrading. Only minimal progress was made with regard to intra-firm process upgrading, and even less in relation to product and functional upgrading (Figure 15). The key issues are following:

- Whether this upgrading trajectory reflects contingencies specific to the history of this particular chain in this particular country or contingencies specific to the South African economy?
- Whether a particular upgrading trajectory is intrinsic to the type of chain (the saligna chain is what is called a buyer-driven chain in the literature), or is a common characteristic of all value chains?

This case study suggests that there is a sequential pattern of upgrading which takes the form shown in Figure 15. It is a sequence which equates roughly to the transition from component manufacturing to original equipment manufacturing (OEM), and from original design manufacturing (ODM) to original brand manufacturing (OBM). However, it is a conjecture, which

needs further exploration before policy conclusions can be drawn with any confidence.

Figure 15 Is there a sequence in value chain upgrading?



Source: Kaplinsky and Readman (2001).

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